Name:

ml1112paper: Solve by factoring (v3)

1. Solve the equation

$$x^2 + x - 56 = 0$$

$$(x - 7)(x + 8) = 0$$
$$x = -8$$
$$x = 7$$

2. Solve the equation

$$x^2 + 16x + 64 = 0$$

$$(x + 8)(x + 8) = 0$$
$$x = -8$$
$$x = -8$$

3. Solve the equation

$$3x^2 + 26x + 80 \;=\; 2x^2 + 9x + 8$$

$$x^2 + 17x + 72 = 0$$
$$(x + 8)(x + 9) = 0$$
$$x = -9$$
$$x = -8$$

4. Solve the equation

$$8x^2 + 5x - 46 \;=\; 7x^2 + 6x - 4$$

$$x^2 - x - 42 = 0$$
$$(x + 6)(x - 7) = 0$$
$$x = 7$$
$$x = -6$$

5. Solve the equation

$$11x^2 + 108x + 81 = 0$$

$$(11x + 9)(x + 9) = 0$$
$$x = -9$$
$$x = \frac{-9}{11}$$

6. Solve the equation

$$7x^2 - 17x - 12 = 0$$

$$(7x + 4)(x - 3) = 0$$
$$x = 3$$
$$x = \frac{-4}{7}$$

7. Solve the equation

$$9x^2 - 17x - 4 \;=\; 6x^2 - 3x + 1$$

$$3x^2 - 14x - 5 = 0$$
$$(3x + 1)(x - 5) = 0$$
$$x = 5$$
$$x = \frac{-1}{3}$$

8. Solve the equation

$$7x^2 - 45x - 37 \;=\; 2x^2 - 9x - 5$$

$$5x^2 - 36x - 32 = 0$$
$$(5x + 4)(x - 8) = 0$$
$$x = 8$$
$$x = \frac{-4}{5}$$